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POSIX
Open Systems Project Engineering Conference (OSPEC)
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POSIX: Portable Operating System Interface

- **Family of operating system interface standards developed by the IEEE Portable Applications Standards Committee (PASC)**
- **Due to UNIX heritage, initially limited to:**
  - **Centralized**
  - **Interactive, time-sharing**
  - **C language**
- **Now, due in part to DoD influence, extended to:**
  - **Distributed**
  - **Realtime, fault tolerant**
  - **Ada language**

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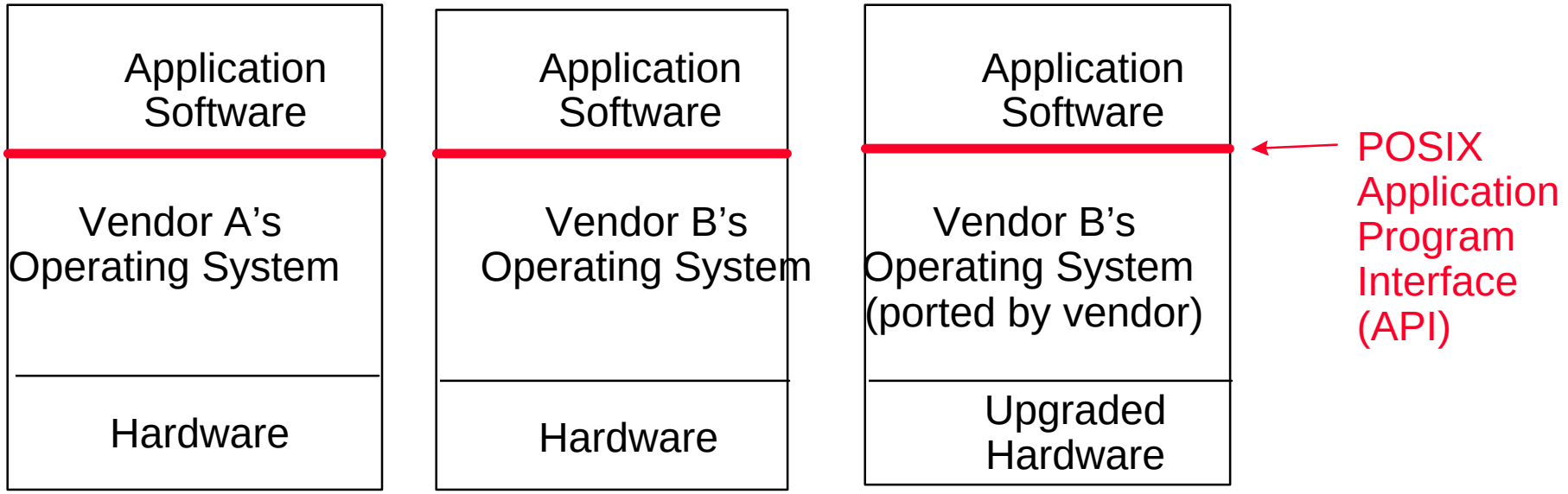
POSIX Objective: Application Software Portability



Initial configuration

App SW is portable across conforming OSs

App SW is also portable across hardware platforms, via conforming OSs

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POSIX Projects: Payoffs

- **Affordability**
  - Suitable COTS operating systems will be available
- **Supportability**
  - Application software will be portable across operating systems (e.g., from an old vendor's product to a new vendor's product)
- **Upgradeability**
  - Vendors will routinely port their standards-conforming operating systems to new and innovative hardware platforms
- **Risk Reduction**
  - Programmer expertise will be applicable across projects

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POSIX Realtime

- **Target application environment: realtime**
- **Target requirements: predictability and high performance**
- **Focus: IEEE PASC participation**
  - **Realtime working group**
  - **Interface standards**
  - **Profile standards**

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POSIX Projects: Recommendations

- **Apply funding and resources to finish standards by deadline**
- **Continue to address marketplace issues**
  - —**Use system engineering principles to organize the many POSIX standards and their optional functionality**
  - —**Increase emphasis on profiles**
  - —**Provide better guidance to users and procurers, who sometimes ask for POSIX and *all* its options, when a subset of the options would better meet their needs**
  - —**Establish better relationships with operating system vendors**
  - —**Pursue conformance testing initiatives**